

Service (NMFS), NOAA, Commerce.

**ACTION:** Proposed rule.

**SUMMARY:** Under the Endangered Species Act, NMFS issued a proposed determination that the eastern North Pacific (California) stock of gray whale should be removed from the List of Endangered and Threatened Wildlife. This proposed change is based on evidence that this stock has recovered to near its estimated original population size and is neither in danger of extinction throughout all or a significant portion of its range, nor likely to again become endangered within the foreseeable future throughout all or a significant portion of its range. NMFS believes that the western Pacific gray whale stock, which is geographically isolated from the eastern stock, has not recovered and should remain listed as endangered.

**DATES:** Comments on the proposed rule must be received by January 21, 1992. Any request for a public hearing must be received by January 6, 1992.

**ADDRESSES:** Comments should be mailed to the Director, Office of Protected Resources, National Marine Fisheries Service, 1335 East-West Highway, Silver Spring, MD 20910. A copy of the 1991 Status Review Report is available upon request.

**FOR FURTHER INFORMATION CONTACT:** Dr. Charles Karnella, NMFS, at (301) 427-2322.

**SUPPLEMENTARY INFORMATION:**

**Background**

The Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*) is administered jointly by the U.S. Fish and Wildlife Service (FWS), Department of the Interior, and NMFS. NMFS has jurisdiction over most marine species and makes determinations under section 4(a) of the ESA as to whether the species should be listed as endangered or threatened. The FWS maintains and publishes the List of Endangered and Threatened Wildlife (the List) in 50 CFR part 17 for all species determined by NMFS or FWS to be endangered or threatened. A list of threatened and endangered species under the jurisdiction of NMFS is contained also in 50 CFR 227.4 and § 222.23(a), respectively.

Section 4(c)(2) of the ESA requires, at least once every 5 years, a review of the species on the List be conducted to determine whether any species should be (1) removed from the List, (2) changed in status from an endangered

**DEPARTMENT OF COMMERCE**

National Oceanic and Atmospheric Administration

50 CFR Part 222

[Docket No. 911009-1252]

Endangered Fish and Wildlife; Gray Whale

AGENCY: National Marine Fisheries

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species to a threatened species or (3) changed in status from a threatened species to an endangered species. NMFS completed its first 5-year review on the status of endangered whales in 1984 (Breiwick and Braham, 1984). Based upon that status review, NMFS concluded that although no longer in danger of extinction, because of limited calving grounds and coastal habitat which is being subjected to increasing development, the eastern Pacific gray whale (*Eschrichtius Robustus*) stock should not be delisted but should be upgraded to threatened (49 FR 44774, November 8, 1984). No further action was taken, however.

On January 3, 1990 (55 FR 164), NMFS announced that it was conducting status reviews on certain listed species (including the gray whale) under its jurisdiction, and solicited comments and biological information. That status review has now been completed and is available to the general public (see **ADDRESSES**).

These two status reviews provide an overview of the available information, along with pertinent references concerning the distribution, migration, stock identity, population abundance and management concerns for the gray whale. The information in this proposed rule is derived mainly from these reports.

#### Summary of Status Review

The gray whale is confined to the North Pacific Ocean. Two stocks occur in the North Pacific: The eastern North Pacific or "California" stock which breeds along the west coast of North America, and the western Pacific or "Korean" stock which apparently breeds off the coast of eastern Asia (Rice, 1981). Because it uses coastal habitats extensively, the gray whale was especially vulnerable to shore-based whaling operations and both stocks were severely depleted by the early 1900s. Under legal protection, the eastern North Pacific stock has recovered to its estimated original, pre-commercial exploitation population size. The estimated present stock size (21,113  $\pm$  688; Breiwick *et al.*, 1989) is above Henderson's (1972, 1984) estimated initial (1846) stock size of 15,000–20,000 but below Reilly's (1981) estimate for carrying capacity of 24,000 gray whales. Between 1967 and 1988, the stock increased at a rate of 3.2 percent ( $\pm$  0.5 percent) per year (International Whaling Commission, 1990; and see Reilly *et al.*, 1983 and Reilly, 1987, for analysis of the 1967–

1980 data; Rugh *et al.*, 1990, for the 1985–1986 data; Breiwick *et al.*, 1989, for the 1988 population estimate). Using Reilly's (1981) estimate with Breiwick *et al.*'s (1989) estimate of population size, it is likely that the gray whale population is within its optimum sustainable population (OSP) size or at about 88 percent of its carrying capacity (21,113/24,000 = 88 percent). However, more recently Reilly (in press) believes it is not entirely clear where the population is in relation to its currently carrying capacity. The stock has increased in spite of increased human use of the coastal habitat (*i.e.*, nearshore migration route where mating and calving occur), and a subsistence catch of 167 ( $\pm$  3.5) whales per year by the Soviet Union during the past 30 years (calculated from data in Ivashin, in press).

Most of the eastern North Pacific stock spends the summer feeding in the northern Bering and southern Chukchi Seas. An unknown number of individuals summer along the west coast of North America in apparently isolated locations as far south as Baja California, Mexico. Beginning in November, this stock leaves the Bering Sea and migrates down the North American coast to winter mainly along the west coast of Baja California. The pregnant females assemble in certain shallow, nearly landlocked lagoons and bays where the calves are born from early January to mid-February. The majority of gray whales in Baja California (including some cows with calves) spend the winter outside the major calving lagoons along the outer coast apparently from Bahia de Sebastian Vizcaino to Boca de las Animas. The northbound migration begins in mid-February and continues through May. By April, the early migrating whales begin showing up in the southern Bering Sea, which they enter through Unimak Pass.

The western Pacific stock formerly occupied the northern Sea of Okhotsk in the summer, and migrated along the coast of eastern Asia to winter calving grounds which probably lie along the coast of southern China in Gwangxi and Gwangdong provinces, and around Hainan Island. Until the turn of this century, another migration route led down the eastern side of Japan to winter grounds in the Seto Inland Sea, Japan. The status of the western Pacific stock of gray whales is uncertain (Brownell and Chun, 1977). Sightings of 24 animals in the Okhotsk Sea and nine off the tip of Kamchatka in 1983 (Blokhin *et al.*, 1985; Votrogov and Bogoslovskaya, 1986), and 34 in 1989 in the Okhotsk Sea (Berzin, in press) suggest that the stock

is small. There is no evidence that it has reoccupied its entire former range (Omura, 1984) and initial stock size may have been only a few thousand (Omura, 1988). It is likely that the stock is below a critical population size sufficient for recovery and may be almost extinct (Rice *et al.*, 1984).

The gray whale formerly occurred in the North Atlantic, but has been extinct there for several centuries.

#### Consideration as a Species Under the ESA

The ESA defines "species" to include any subspecies of fish, wildlife, or plants, and any distinct population segment of any species or vertebrate fish or wildlife which interbreeds when mature.

Two stocks of gray whales remain extant, both in the North Pacific Ocean: The western stock, which migrates between feeding grounds in the Sea of Okhotsk and calving grounds along the South China Coast; and (2) the eastern stock, which migrates between calving grounds along the West Coast of Mexico and feeding grounds in the Bering and Chukchi Seas (Rice and Wolman, 1971). These stocks appear to be significantly isolated both geographically and reproductively from each other. Recent strandings of gray whales on the Commander Islands are believed to be from the eastern stock while gray whales reported along the Kamchatka coast are believed to be from the Okhotsk-South China population (IWC, 1990). Alternatively, all strandings may be from the Korean stock (Rice, 1981; IWC 1986). Since gray whales mate during their autumnal southward migration, rare vagrants would make interbreeding between the California and western Pacific population possible. However, that possibility would be greatly reduced if, as Rice (1981) believes likely, most vagrants are immature animals. The absence of sightings between the Okhotsk Sea and the Commander Islands suggests the stocks are separate. In addition, an absence of aboriginal whale hunting records along the Pacific coast of the Kamchatka Peninsula suggests a lack of abundance of gray whales in the area and a hiatus in distribution between eastern and western stocks (Mitchell, 1990). After reviewing the data available to it, the International Whaling Commission (IWC) Scientific Committee on the Assessment of Gray Whales (IWC, 1990) agreed that the eastern and western populations of gray whales

probably represent geographically isolated stocks, although recognizing that the existing data are not conclusive.

Based on the above discussion, NMFS believes that the eastern North Pacific gray whale stock should be considered a distinct population and hence a species under the ESA.

#### Summary of Factors Affecting the Species

Section 4(a)(1) of the ESA and the NMFS' listing regulations (50 CFR part 424) set forth procedures for listing, reclassifying or removing species. The Secretary of either the Interior or Commerce depending upon the species involved, must determine through the regulatory process if any species is endangered or threatened based upon any one or a combination of the following factors: (1) The present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, recreational, scientific or educational purposes; (3) disease or predation; (4) inadequacy of existing regulatory mechanisms; or (5) other natural or man-made factors affecting its continued existence. Under section 4(a)(2) of the ESA, if the Secretary of Commerce determines that a species under his jurisdiction should be removed from the List or changed in status from endangered to threatened, the Secretary then recommends such action to the Secretary of the Interior. If the Secretary of the Interior concurs with the action, he must implement the action by amending the List. However, if a species is removed from the List, the Secretary of (Commerce or the Interior depending upon the species involved) under section 4(g) of the ESA, must implement a system in cooperation with the states to monitor effectively for a period not less than 5 years the status of the species and must use the emergency authority provisions under paragraph (b)(7) of section 4 to prevent a significant risk to the well-being of any recovered species.

#### (1) *The Present or Threatened Destruction, Modification or Curtailment of Its Habitat or Range*

Two potential threats to the eastern North Pacific gray whale population may be increasing vessel traffic, including whale watching activities, and industrial development, including oil and gas exploration and development, in the calving lagoons, feeding grounds, and along the migration route.

Commercial cruise boats and small pleasure craft may result in harassment, especially in the calving lagoons and along its migration route off California. As whale watching activities increase

rapidly in southern California and on the Baja Peninsula, harassment occurrences are increasing proportionally. Whale watching by recreational and commercial craft may negatively impact migrating gray whales by interrupting swimming patterns and thereby increasing energy consumption (IWC, 1990). Vessels in the calving lagoons may cause short-term flight reactions by gray whales when the vessel is moving at high speeds or erratically, but will show little response to slow moving or anchored vessels. Gray whales have been reported to avoid vessels at ranges of roughly 0.5 km. and less, with no documented responses at further distances (IWC, 1990). However, Jones and Swartz (1984) in a study of gray whales in Bahia San Ignacio found that data suggest that gray whales possess sufficient resiliency to tolerate the physical presence and activities of whale watching vessels and skiffs and the noise produced by this level of activity without major disruption. They believe a key factor responsible for maintaining a stable population within their study lagoon was the establishment of the gray whale refuge which provided an area free of all vessel activity to which whales could retreat and the behavior of commercial whale watch operators to minimize disturbance.

Under the Marine Mammal Protection Act (MMPA), gray whale harassment is considered a "take" and is prohibited thereunder. NMFS has established guidelines for whale watching in order to avoid harassment of gray whales on their migration path in U.S. waters and will propose regulations to govern whale-watching activities later this year. These regulations, which will be effective within waters under U.S. jurisdiction but not in waters under jurisdiction of the governments of Canada and Mexico, will establish minimum approach distances for large cetaceans and will require procedures to avoid disrupting the normal movement or behavior of a marine mammal. It is anticipated that these regulations will strengthen protective measures for gray whales principally during migratory periods.

The main gray whale calving grounds in Mexico are Laguna Ojo de Liebre (Scammon's Lagoon with 53 percent of calves), Laguna Guerrero Negro (9 percent), Laguna San Ignacio (11 percent) and Estero Soledad (12 percent) in Mexico (Rice *et al.*, 1984). Minor calving areas, each with less than 6 percent of the calves, are San Juanico Bight, Bahia Magdalena, Bahia Almejas, and Bahia Santa Marina (Rice *et al.*, 1981, 1984). Between 1972 and 1979, the

Mexican Government designated three (Laguna Ojo de Liebre, Laguna Guerrero Negro, and Laguna San Ignacio) of the four major calving lagoons in Baja California as gray whale refuges. These are the lagoons that most of the U.S. tour boats and private tourists visit. The number of vessels allowed in the lagoons at any one time is limited by permit, and entry into certain areas is forbidden. To provide additional protection of gray whales within Mexican waters, the Government of Mexico is in the process of implementing its own standards for governing whale watching activities.

A second potential threat to the eastern North Pacific gray whale stock is oil and gas exploration and related activities along its migration route. Oil and gas exploration is contemplated or under way on the outer continental shelf (OCS) from California to the Beaufort Sea, throughout the migration range of this species. (In addition, other types of mineral resource development (e.g., gold mining) are under consideration within possible gray whale feeding areas in the Bering Sea.) Annually, the gray whale population migrates by or through at least eight oil lease areas within U.S. waters (Rice *et al.*, 1984).

On the winter calving grounds, exploratory areas include sites within and adjacent to present calving and rearing areas, such as the offshore waters of Sebastian Vizcaino Bay, where seismic exploration for gas deposits took place during 1981.

Potential impacts from oil and gas exploration and development include noise disturbance, contact with spilled oil, habitat degradation and possible loss or destruction of benthic prey populations upon which gray whales depend. Noise disturbance to gray whales has been studied during their migrations along the California coast (Malme *et al.*, 1983 and 1984) and on their calving grounds in Baja California Sur, Mexico (Dahlheim 1983, 1984; Dahlheim *et al.*, 1984). Reactions of gray whales to recordings of industrial noise and to a seismic airgun source during migration have shown that avoidance behavior occurs only at relatively close ranges at decibels greater than 120 dB for continuous noise and 160–170 dB for pulsed sounds such as from airguns (Tyack, 1988). Malme *et al.*, (1984) for example, found a 50 percent probability of an avoidance response of 2.5 km. off central California for a seismic array, but only 40 m. for drillship noises. However, because noise from oil and gas activities occurs at frequencies which overlap gray whale calling (and assumed) hearing frequencies, they may

also influence other behavior causing, for example, interference with socialization, reproductive behavior and communication.

Reactions of gray whales studied in their calving grounds to industrial noises were more pronounced than those found off central California, including vacating the study area during the projection of drilling sounds, as well as changes in the acoustical and observed surface behavior and distribution (Dahlheim, 1988).

Gray whales may also be sensitive to noise disturbance on their feeding grounds and might abandon productive feeding areas if excessively disturbed. Reliance on less productive areas could leave the animals with insufficient body reserves for their successful migration and reproduction. However, because of its abundance and range, the present gray whale population could likely tolerate without significant effects, the short-term and non-recurring local impacts brought on by seismic exploration (NMFS Biological Opinion for Lease Sale 100, dated December 21, 1984).

A third potential threat to the gray whale is the possibility of a major oil spill that would affect a large portion of the population. Assuming an oil spill were to occur and contact gray whales, the worst adverse impacts to whales from contact would include death or illness caused by ingestion or inhalation of oil, irritation of skin and eyes, fouling of feeding mechanisms, and reduction of food supplies through contamination or losses of food organisms. Although no data exist at this time, likely direct adverse impacts include (1) conjunctivitis and corneal eye inflammation leading to reduced vision and possible blindness, (2) development of skin ulcerations from existing eroded areas on the skin surface with subsequent possibility of infection, (3) compromising of tactile hairs as sensory structures, and (4) development of bronchitis or pneumonia as a result of inhaled irritants (Albert, 1981). In general, however, the results of Geraci and St. Aubin (1982, 1985; Geraci, 1990) indicate that whales are likely to suffer only minor impacts if they contact oil spills, and that they are likely to recover from these effects.

Because the probable effects on whales from contacting oil include temporary fouling of baleen, and toxic effects from ingestion of oil, oil spills may pose a greater problem for the gray whale on its feeding grounds than during its migration. In a laboratory study on bowhead whales (*Balaena mysticetus*), baleen plates fouled by oil had decreased filtering efficiency for at least

30 days, but 85 percent of the efficiency was restored within 8 hours (Braithwaite *et al.*, 1983). However, the toxic effects of ingesting oil remain unknown. A recent computer model simulating an oil spill, projected a 6.3 percent chance that at least one gray whale would encounter oil in the Bering Sea during the 30- to 40-year lifespan of an individual oil field (Neff, 1990).

Oil spills, the chemicals used to break up and sink surface oil, and other anthropogenic materials could also harm gray whales by reducing or contaminating their food resource. Gray whales are opportunistic feeders on benthic amphipods, and other bottom dwelling organisms (Nerini, 1984). Most feeding takes place between May and September in the northern waters, with little food consumption during migration and on the calving grounds (Nerini, 1984). The effects of pollutants on the benthic organisms on which these whales feed are generally unknown. Preliminary results from a study by NMFS on contaminants found in gray whales stranded near Puget Sound indicate that heavy metal levels appear to be too low to cause any deleterious effects. In addition, the concentrations of PCBs and DDT were very low compared to other whale levels and are below levels known to cause impairment (NMFS unpublished data). According to Brownell and O'Shea (1990), levels of organochlorine pollutants that may cause reproductive problems in other mammals are higher than those reported in baleen whales. In addition, gray whales feed mostly in colder waters that have been less exposed to organochlorine pollutants (IWC, 1990).

Coastal and offshore industrial activities may also result in some impacts. For example, in the calving lagoon of Guerrero Negro, daily dredging and vessel traffic between 1957 and 1967 reportedly caused the whales to abandon the area. Six years after the dredging and barge activity ceased, gray whales began to return to the lagoon (Gard, 1974; Bryant and Lafferty, 1980). Exploitation of phosphorus near the calving lagoon of Bahia Magdalena may be cause for concern (Cordoba, 1981). Because of the scarcity of suitable isolated calving and nursery areas for gray whales, and the whales' specialized feeding habits, future coastal or shallow-water development should be monitored to determine the effects on any critical stages of the gray whale's life cycle.

As the recovery of the gray whale population has occurred concurrent with extensive OCS geophysical exploration and other activities throughout its range,

NMFS concludes that current and near-future levels of human activities do not pose a threat to the species' continued existence, but does not rule out the possibility that parts or all of this stock and certain components of its habitat have been and/or are being stressed or that the effects will not be manifested over time as changes in productivity, mortality or distribution.

## (2) Overutilization for Commercial, Recreational, Scientific or Educational Purposes

As a result of commercial whaling operations, the gray whale was severely depleted by the early 1900's. After 1946, commercial whaling on gray whales was banned by the International Convention for the Regulation of Whaling. Between 1959 and 1969, 316 gray whales were killed under Special Scientific Permits off California.

Eskimos living on the shores of the northern Bering Sea and the Chukchi Sea have hunted whales for perhaps several thousand years. In Alaska, the catch is mostly bowhead whales with very few gray whales taken. However, on the Chukotka coast of the U.S.S.R., the catch has been almost entirely gray whales. Since 1969, gray whales have been taken by the Soviet Government for the Chukchi Eskimos using one modern catcher boat. The total aboriginal catch has averaged about 165 gray whales per year since 1967. The current catch limit set by the IWC is 169 per year. This authorized subsistence catch of gray whales in the Arctic is believed to be within the maximum sustainable yield for the species (Reilly, 1984).

## (3) Disease or Predation

The natural mortality rate of the gray whale is low, approximately 0.056 for adults and 0.132 for juveniles (Reilly, 1981). There is no information indicating that disease or predation constitutes a threat to the continued welfare of the species.

The killer whale (*Orcinus orca*) appears to be the only non-human predator on gray whales. Evidence from the necropsy of 39 gray whales that stranded on St. Lawrence Island indicated that 16 had been killed by killer whales (Fay *et al.*, 1978). The mortality rate from killer whale attacks is unknown. However, the frequency of tooth scars on gray whale carcasses indicates that killer whale attacks are often not fatal.

Moderate numbers of gray whale calves strand in and near the nursery lagoons (Swartz and Jones, 1983). In addition, a few adults strand every year

throughout their range, but the numbers appear low compared with the size of the population (Rice *et al.*, 1984). In 1989, 29 (3 possible recounts) gray whales were reported stranded in Alaska from the area from Prince William Sound to the Alaskan Peninsula and into Bristol Bay around the time of the EXXON VALDEZ oil spill; nine (2 possible recounts) of those animals were reported stranded near the southern end of Kodiak Island, southwest and down-current of the oil spill area. In 1990, 26 gray whales were counted off the southern end of Kodiak Island. Surveys of the other areas were not conducted that year. Although some gray whales were reported in 1989 to have oil on their baleen, apparently none had oil in the digestive tract (Moore and Clark as reported in IWC, 1990). The relationship of these strandings to the oil spill remain conjectural at this time.

Recent strandings reported along the Washington/Oregon coast have also been higher than the mean for the past 2 years, but not higher than historic records (NWAFC stranding data). The majority of these animals apparently died outside Puget Sound and were carried by currents to the outer coast of Washington and the Straits of Juan de Fuca.

#### (4) Inadequacy of Existing Regulatory Mechanisms

Existing laws and regulations are considered adequate for the conservation of the gray whale. Under legal protection, the eastern North Pacific gray whale stock has recovered to near or above its estimated pre-commercial exploitation population size. Most of the protective measures for the gray whale would remain even without listing under the ESA. The gray whale is protected in the United States under the MMPA and the Whaling Convention Act, internationally under the International Convention for the Regulation of Whaling as well as under national legislation in Canada, Mexico, and the U.S.S.R., although the effectiveness of this legislation is not known. Mexico has particularly detailed legislation protecting the calving lagoons from disturbance (Klinowska, 1991).

Additional protection is afforded internationally under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). CITES was created to prevent species becoming threatened through international trade (Wells and Barzdo, 1991) and prohibits commercial trade in seriously threatened species, which are listed in CITES appendix I. Trade in appendix I species, such as the gray

whale, may be authorized only in exceptional circumstances (e.g., scientific research), and provided the import is not for commercial purposes. All international shipments must be covered by an export permit and an import permit from the country of destination.

In the United States, irrespective of the outcome of this proposal, activities that incidentally take marine mammals are either limited under an MMPA small take exemption or prohibited. Oil and gas exploration activities, for example, are eligible to apply for a small take exemption under section 101(a)(5) of the MMPA. Under both implementing regulations and Letter of Authorization, NMFS requires the oil and gas industry to take appropriate measures to avoid impacts to gray whales and to plan leasing and exploration activities in such a way as to reduce the likelihood of adversely affecting the gray whale. The Letters of Authorization also include requirements for monitoring and reporting. For the 1991/92 exploration season, NMFS has issued five Letters of Authorization (50 FR 47742, Sept. 20, 1991).

#### (5) Other Natural or Man-made Factors Affecting Its Continued Existence

The narrow, nearshore corridor in which gray whales migrate results in a high probability that they will encounter and perhaps become entangled in gear from several commercial fisheries. Norris and Prescott (1961) document entanglement in gillnets since the late 1950s. Data from the NMFS-administered stranding networks document that commercial gillnet fisheries take gray whales incidental to fishing. NMFS's Southwest Region has maintained records of reported gray whale entanglements in California gillnet fisheries since the 1984/85 migration. The number of entanglements has varied from a low of 7 entanglements and no mortality during the 1985/86 migration to a high of 15 entanglements and 3 mortalities during the 1986/87 migration. The number of entanglements and deaths declined during the 1987/88 migration to 7 entanglements and 1 mortality. This reduction in entanglements may have been due to regulations implemented by the State of California in the fall of 1987 that require fishermen to construct their nets so that whales can break through them and that prohibit fishing near major whale concentrations. However, no study was in place to quantify the effectiveness of these regulations and the decline in entanglement could be due to natural variation.

The California Department of Fish and Game (CDF&G) observed one entangled baleenopterid (probably a minke whale) during 177 observer days spent monitoring the shark and swordfish drift net fishery in 1980. CDF&G's southern California set net monitoring program monitored about 5 percent of the fishing effort during from 1983 through 1986 and observed no gray whale entanglements (Collins *et al.* 1984, 1985, 1986; Vojkovich *et al.* 1987). Likewise, CDF&G set net observers in northern California reported no gray whales entanglements during monitoring of about 1 percent of the fishing effort from 1984 through 1987 (Wild, 1985, 1986).

In the Pacific Northwest, gray whales have been observed entangled in salmon set nets off northern Washington and in crab pot lines off Oregon. These entanglements are infrequent, occurring once every 1 to 3 years in the set net fishery and once every 3 to 5 years in the crab fishery. (NMFS, 1991).

Heyning and Dahlheim (1990) reported on strandings and incidental takes of gray whales from Alaska to Mexico for the years 1975-1988. Gray whale strandings were examined carefully to document whether the animal had been entangled in fishing gear. Some known fishery kills of gray whales bore no evidence of entanglement after stranding despite thorough examination (Heyning and Lewis, 1990). Data from the Heyning and Lewis study suggested that (1) sexually immature animals represented 90 percent of all strandings, and (2) gray whale mortality related to fisheries interactions is likely insignificant relative to the present population size.

Minimal estimates of fisheries-related mortality for stranded animals ranged from 8.7 to 25.8 percent (Heyning and Dahlheim, 1990). None of the 20 animals documented in that report from Alaskan feeding grounds had indications of entanglement in fishing gear. In the Gulf of Alaska and Alaskan Peninsula area, 4 animals out of 29 (13.8 percent) were involved in fishing gear. Baird *et al.* (1990) reviewed the available information for British Columbia and found 4 animals out of 39 strandings (11.1 percent) were involved in fishing gear. They noted that if they included only the 15 strandings that were carefully examined, then 26.7 percent of mortalities were fisheries related.

The fisheries related mortality for Washington, Oregon and northern California are 8 out of 50 (16 percent), 2 out of 23 (8.7 percent), and 6 out of 47 (12.8 percent), respectively. In southern California, more carcasses have been examined thoroughly and 25 out of 92

(25.8 percent) were mortalities related to fishing operations. Heyning and Lewis (1990) have reviewed baleen whale entanglements in this region and found that the majority of gray whale entanglements involved immature animals but not calves. Almost two-thirds of these entanglements occurred during the northbound migration.

#### Consultations Under Section 7 of the ESA

Between January 20, 1983, and December 21, 1984, NMFS issued five site specific Section 7 biological opinions concerning gray whales that contained findings that certain OCS activities could jeopardize the continued existence of the species.<sup>1</sup> These opinions were for OCS Lease Sale 57, Norton Sound, 1/20/83; OCS Lease Sale 70, St. George Basin, 3/9/83; OCS Lease Sale 89, St. George Basin, 3/21/84; OCS Lease Sale 92, North Aleutian Basin, 3/21/84; and OCS Lease Sale 100, Norton Sound, 12/21/84. In general, these biological opinions noted that, other than for geophysical seismic surveys, impacts from drilling noise and support activities associated with OCS oil and gas exploration were not likely to jeopardize the continued existence of gray whales. These opinions noted that geophysical seismic activities could affect gray whale migrations and were likely to jeopardize the continued existence of these species. Similarly, these opinions noted that an uncontrolled blowout or major oil spill in the sale area when gray whales were present was likely to jeopardize the continued existence of this species. It was noted also that there was insufficient information to determine whether or not the cumulative impacts from oil and gas development could jeopardize the continued existence of the gray whale. Lease sales 100 and 89 were canceled in April and May of 1986, respectively. Lease sales 57 and 70, which were held in March and April, 1983, have not been activated.

Since the issuance of these five biological opinions in 1983 and 1984, a number of studies have been completed on the possible effects of OCS activities on gray whales. This research was discussed in some detail above. In general, research results indicate that (1)

the size of the gray whale stock is large and increasing; (2) reactions of gray whales to recordings of industrial noise and more particularly to a seismic airgun source during migration have shown that avoidance behavior occurs only at relatively close ranges; (3) there is a low probability of an oil spill resulting from a blowout during exploratory drilling (Minerals Management Service, 1987a, 1987b); (4) there is a low probability of any spilled oil intercepting whales (Neff, 1990); and (5) there is evidence (Kent *et al.* 1982; Geraci, 1990; Geraci and St. Aubin, 1982; St. Aubin *et al.*, 1984) indicating that whales may be able to avoid contact with spilled oil, are likely to suffer only minor impacts if they contact or ingest spilled oil, and are likely to recover from those effects. Based upon these results, NMFS now believes that while the cumulative impacts from oil and gas activities may have the potential to adversely affect the eastern North Pacific gray whale stock, these impacts are not likely to jeopardize its continued existence.

More recently, biological opinions concerning gray whales have contained no jeopardy determinations. These include biological opinions for the Beaufort/Chukchi Sea (Lease sales 71 and 87 Beaufort Sea (Diapir Field) 5/19/82 and 12/19/83; Lease sale 87 and 97, Beaufort Sea 12/19/83 and 5/20/87; Lease Sale 109, Chukchi Sea 9/1/87; and Arctic Region 11/23/88), the Bering Sea (Norton Sound OCS mining program; 5/5/88) and northern and southern California (Lease Sale 91, northern California 4/28/88; Lease Sale 73, Santa Maria Basin 8/9/83; Lease Sale 80, southern California 10/4/83).

No new lease sales are proposed for Washington, Oregon, or central and northern California before 1997. In southern California no lease sales are contemplated until at least 1996 when 86 blocks in the Santa Maria Basin and Santa Barbara Channel will be considered (Minerals Management Service, 1991). In Alaska, two lease sales in the Beaufort Sea (1993 and 1996), two for the Chukchi Sea (1994 and 1997) and one each in Cook Inlet (1994) and Gulf of Alaska (1995) are proposed, and several additional sales are possible (Minerals Management Service, 1991).

#### Discussion

An endangered species is any species that is in danger of extinction throughout all or a significant portion of its range; a threatened species is any species that is likely to become an endangered species within the

foreseeable future. The ESA requires that a determination to list (or delist) a species as endangered or threatened be made solely on the basis of the best available scientific and commercial information concerning that species relative to the factors discussed above.

The eastern North Pacific stock of the gray whale has recovered to near or above its estimated pre-commercial exploitation population size. It is at approximately 88 percent of its estimated carrying capacity and is probably still increasing. NMFS therefore believes that this stock is not currently in danger of extinction throughout all or a significant portion of its range. Moreover, even though the eastern Pacific gray whale stock inhabits coastal waters that are increasingly impacted by human activities, the stock continues to increase and, therefore, is not likely to become an endangered species again within the foreseeable future throughout all or a significant portion of its range. Based upon the assessments discussed above, NMFS believes that individual and cumulative impacts, while they may have the potential to adversely affect the eastern North Pacific gray whale stock, are not likely to jeopardize its continued existence. Therefore, NMFS believes the eastern North Pacific stock of the gray whale should be removed from the list of Endangered and Threatened Species under the Endangered Species Act of the ESA. However, because the gray whale is exposed frequently to human activities, and cumulative impacts may result in some indirect effects, long-term monitoring of the health of the gray whale stock should be conducted.

Removing the eastern North Pacific gray whale stock from the List would not result in a major reduction in protection. While the protections and prohibitions of the ESA, including the consultation requirements of section 7, would cease to apply, the gray whale would remain subject to prohibitions against taking under the MMPA. In addition, because the species also remains protected under the U.S. Whaling Convention Act and International Convention for the Regulation of Whaling, the number of gray whales authorized to be taken for subsistence purposes would continue to be limited by the IWC.

NMFS also believes that the western Pacific gray whale stock, which is geographically isolated from the eastern stock, has not recovered and should remain listed as endangered.

<sup>1</sup> On January 22, 1982, NMFS issued a regional Biological Opinion for proposed OCS leasing and exploration in four planning areas of the Bering Sea (i.e., Norton Sound, St. George Basin, Northern Aleutian Shelf and Navarin Basin). NMFS concluded that there was insufficient information concerning oil and gas exploration activities in the Bering Sea to allow a determination whether such activities are likely to jeopardize the continued existence of endangered whales found there.



## Monitoring

Section 4(g) of the ESA requires that whenever a species is removed from the List, the Secretary implement a system, in cooperation with the states, to monitor effectively the status of any species that has recovered to the point where the protective measures provided under the ESA are no longer necessary. This monitoring program will continue for at least 5 years and, if at any time during that period the Secretary finds that the species' well-being is under a significant risk, the ESA (section 4(b)(7)) provides that emergency protective regulations shall be issued to ensure the conservation of any recovered species.

As part of its monitoring program, NMFS intends to create a Task Group responsible for monitoring activities potentially impacting gray whales. This Task Group will consist of marine mammal scientists familiar with either gray whale biology or related subject matter and will be expected to coordinate internal research on gray whales, encourage independent research in areas not currently funded or investigated by NMFS, and serve as a quick response advisory team in the event of any catastrophic event impacting gray whales. The Task Group will also recommend to the Assistant Administrator for Fisheries, NOAA (Assistant Administrator) appropriate steps necessary to mitigate any catastrophic event including the reimposition of emergency protective measures. Finally, within 6 months following the conclusion of the first 5-year monitoring program, the Task Group will conduct a comprehensive "status review" of the gray whale which will be forwarded to the Assistant Administrator for approval and release to the general public for review and comment. Included in that report will be a recommendation on whether (1) to continue the monitoring program for an additional 5 years, (2) terminate the monitoring program or (3) reconsider the status of the gray whale.

NMFS encourages the Minerals Management Service (MMS) and other Federal agencies to continue studies on gray whale distribution, abundance, and habitat use in the Bering, Chukchi, and Beaufort seas and on the impacts of seismic exploration, offshore drilling activities, oil spills, and vessel traffic. In addition to research on gray whales conducted in the United States through independently funded sources and in Mexico by the government of Mexico, NMFS plans to conduct the following as part of its monitoring program:

(1) Monitor the status of the gray whale and habitats essential to its survival;

(a) Conduct a biennial population assessment to include:

(i) A census of the southbound migration for comparison with historical research;

(ii) Carry out research as needed to determine any potential biases in the estimation of procedures (e.g., offshore distribution, tails of the migration, night-time migration rates);

(iii) Estimate population productivity using data obtained from (i) and (ii) above, and from life history studies, as may be appropriate, such as calf production; and

(iv) A determination of the shape of the productin curve of the population—that is, the "point" or series of estimates which suggest that the population has reached its carrying capacity.

(2) To the extent possible, encourage MMS to continue studies to determine the impacts of oil spills; vessel traffic, including noise; seismic exploration; and offshore drilling activities on gray whales.

(3) Continue monitoring the level of gray whale mortality through small take and commercial fishery exemptions, stranding programs and other activities.

(4) Implement whale watching regulations for U.S. citizens and others within the U.S. EEZ and promote with Mexico and Canada the use of similar standards for whale watching within their waters.

(5) Continue and promote increased cooperative studies with Mexico to monitor habitat use and the impacts of whale watching on the Mexican calving grounds; encourage the enforcement of gray whale sanctuary regulations in Mexico, and for operators of U.S. whale watch vessels to observe Mexican sanctuary regulations.

## Public Comments Requested

NMFS is soliciting information and comments on this proposed action. Specifically, NMFS is requesting information on the status of the gray whale, potential threats to the population, and the effects of activities on the species. In making a final determination concerning the status of the gray whale under the ESA, NMFS will take into account the data, views, and comments received during the comment period. In accordance with section 4(a)(2) of the ESA, NMFS is requesting the concurrence of the FWS on this proposal.

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#### Classification

The 1982 amendments to the ESA (Pub. L. 97-304) in section 4(b)(1)(A), restricted the information that may be considered when assessing species for listing. Based on this limitation of criteria for a listing decision and the opinion in *Pacific Legal Foundation v. Andrus*, 657 F.2d 829 (8th Cir., 1981), NMFS has categorically excluded all

endangered species listings from environmental assessment requirements of the National Environmental Policy Act (48 FR 4413, February 6, 1984).

The Conference Report on the 1982 amendments to the ESA, notes that economic consideration have no relevance to determinations regarding status of species, and that Executive Order (E.O.) 12291 economic analysis requirements, the Regulatory Flexibility Act and the Paperwork Reduction Act are not applicable to the listing process. Similarly, listing actions are not subject to the requirements of E.O. 12612.

#### List of Subjects in 50 CFR Part 222

Administrative practice and procedure; Endangered and threatened wildlife; Exports; Fish; Imports; Marine mammals; Reporting and recordkeeping requirements.

Dated: November 18, 1991.

William W. Fox, Jr.,  
Assistant Administrator for Fisheries.

For the reasons set forth in the preamble, 50 CFR part 222 is proposed to be amended as follows:

#### PART 222—ENDANGERED FISH OR WILDLIFE

1. The authority citation for part 222 continues to read as follows:

Authority: 16 U.S.C. 1531-1543.

#### § 222.23 [Amended]

2. In § 222.23(a), paragraph (a) is amended by removing the words "Gray whale (*Eschrichtius robustus* (*glaucus*, *gibbosus*))" in the second sentence and adding in their place the words: "Western Pacific (Korean) Gray whale (*Eschrichtius robustus*)."

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